

CLAIMS

What is claimed is:

1. An electric wrench for vehicle repairing comprising:

a DC driving motor, one end of which is connected to the power source with power supply from a motor vehicle's battery, the other end of which is fixed onto a motor bracket by at least one screw with a slot on the motor bracket above the center axis for placing one end of a transmission shaft, and the center of which is connected to a motor gear through the motor bracket;

transmission gears having a wheel gear with a hole in the center for the transmission shaft to go through and with the motor gear inside it below the hole and the gear teeth of the motor gear and the wheel gear meshing with one another;

a clutch having a hole in the center for the transmission shaft to go through and having a clutch bracket with at least one hole for fixing the clutch to the wheel gear by a set pin going through it and with two balancing weights fixed onto two of its opposite sides by rivets, two small rotating shafts which are parallel to the two balance weights and fixed onto the clutch bracket by screws, two coil springs which are perpendicular to and connected to the two small rotating shafts with friction reducing washers in between, a controlling bracket sliding along the inner surface of the clutch bracket, and a collar for keeping the controlling bracket in position inside the clutch bracket;

a power accumulator with a harrow in the center for the transmission shaft to go through and having a base block and a cover block fixed together by at least one screw to form a harrow inside, and one end of the base block being fixed inside the center of the clutch through the collar and connected to the wheel gear with the clutch bracket in between by the one or more set pin, and the other end of the base

block facing the inner surface of the cover block having at least two holes for allowing cylindrical pins to move inside and a hammer with an impact surface facing the inner surface of the cover block above the center fixed by a screw; and a transmission shaft with one end of which fixed onto the motor bracket with a fiction reducing bearing surrounding it, and going through the center of the wheel gear with a fiction reducing bearing surrounding it and being above and parallel to the axis of the motor gear, and further going through the center of the clutch bracket and then the center of the base block with at least two ball bearings and an outer ring supporting it at the opening of the base block facing the cover block for fiction reduction, and forming a square block in the harrow formed by the base block and the cover block with a hammer block on one of its side corresponding to the hammer on the base block, and with at least two cylindrical pins going through the holes of the base block protruding with one end of the cylindrical pins pressing against the collar and the other end pressing against the side of the hammer block facing the base block, and with a spring surrounding the transmission shaft in between the hammer block and the opening of the cover block with a cap near the opening fixing the position of the spring, and with at least two ball bearings and an outer ring supporting it at the opening of the cover block for fiction reduction, and the front part of the transmission shaft protruding from the opening of the cover block with a washer in between and a bearing surrounding it for fiction reduction, and with a rubber washer at the front end of the transmission shaft for fitting onto a positioning tube for adapting to drive a nut or bolt.

2. The electric wrench for vehicle repairing according to claim 1, wherein the hammer and the hammer block are each in the shape of a section of a ring being

one-sixth of the ring and each corresponds to the other so as to generate the greatest output torque.

3. The electric wrench for vehicle repairing according to claim 1 , wherein the impact surface between the hammer and the hammer block is at an oblique angle in the range of 5° to 15° to facilitate ease of engagement and disengagement.

4. The electric wrench for vehicle repairing according to claim 1, wherein the impact surface between the hammer and the hammer block is at an oblique angle of 10° to facilitate ease of engagement and disengagement.